

Appl. No. 10/088,496  
Amendment dated: September 30, 2003  
Reply to OA of: March 31, 2003

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

Claims 1-8(canceled).

9(original). A method of suppressing excessive Th1 cell mediated immune responses and stimulating Th2 cell mediated immune responses in a patient during ongoing infection and/or inflammation in said patient comprising administration of an Th1 cell response suppressing and Th2 cell response stimulating amount of at least one type of xanthophylls to said patient.

10(currently amended). The method according to claim 9, wherein the excessive Th1 cell mediated immune responses are caused by at least one disease from the group consisting of autoimmune diseases, ~~[[and]]~~ chronic viral and intracellular bacterial infections.

11(currently amended). The method according to claim 10, wherein the disease is Psoriasis vulgaris, Multiple sclerosis (MS), ~~Rheumatoid~~ Rheumatoid arthritis, Crohn's disease, Insulin-dependent diabetes mellitus, ~~Tuberculosis~~ Tuberculosis (TB), Acute graft-versus-host disease (transplant rejection), or HIV virus infection.

12(original). The method according to claim 9, wherein the type of xanthophyll is astaxanthin.

13(original). The method according to claim 12, wherein the astaxanthin is in a form esterified with fatty acids.

Appl. No. 10/088,496  
Amendment dated: September 30, 2003  
Reply to OA of: March 31, 2003

14(previously presented). The method according to claim 12, wherein the astaxanthin is derived from a natural source.

15(original). The method according to claim 14, wherein the natural source is a culture of the algae *Haematococcus sp.*

16(previously presented). The method according to claim 13, wherein the astaxanthin is derived from a natural source.

17(previously presented). The method according to claim 16, wherein the natural source is a culture of the algae *Haematococcus sp.*

18(withdrawn). A medicament for suppression of excessive Th1 cell mediated immune responses and stimulation of Th2 cell mediated immune responses in a patient during ongoing infection and/or inflammation in said patient which comprises an effective amount of at least one type of xanthophyll for suppression of excessive Th1 cell mediated immune responses and stimulation of Th2 cell mediated immune responses in said patient.

19(withdrawn). A medicament according to claim 18, wherein the excessive Th1 cell mediated immune responses are caused by at least one disease from the group of autoimmune diseases and chronic viral and intracellular bacterial infections.

20(withdrawn). A medicament according to claim 18, wherein the disease is Psoriasis vulgaris, Multiple sclerosis (MS), Rheumatoid arthritis, Crohn's disease, Insulin-dependent diabetes mellitus, Tuberculosis (TB), Acute graft-versus-host disease (transplant rejection), or HIV virus infection.

Appl. No. 10/088,496

Amendment dated: September 30, 2003

Reply to OA of: March 31, 2003

21(withdrawn). A medicament according to claim 18, wherein the type of xanthophyll is astaxanthin.

22(withdrawn). A medicament according to claim 19, wherein the astaxanthin is in a form esterified with fatty acids.

23(withdrawn). A medicament according to claim 21, wherein the astaxanthin is derived from a natural source.

24(withdrawn). A medicament according to claim 23, wherein the natural source is a culture of the algae *Haematococcus* sp.

25(withdrawn). A medicament according to claim 16, wherein the medicament is an oral preparation.